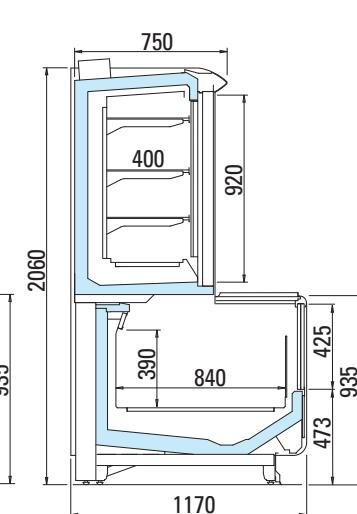
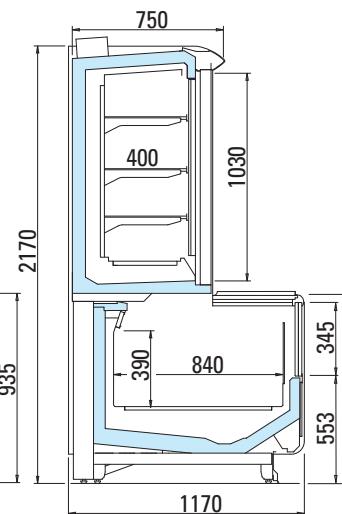
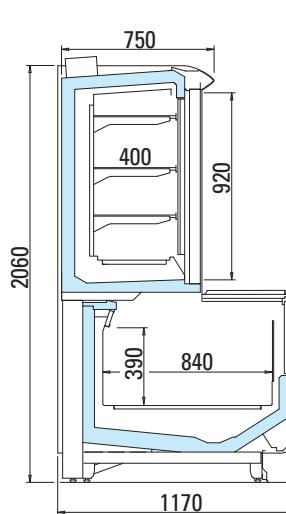
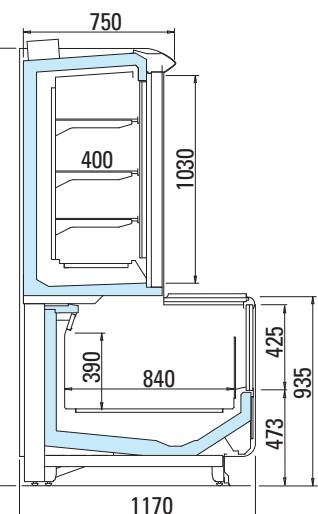


1

G3

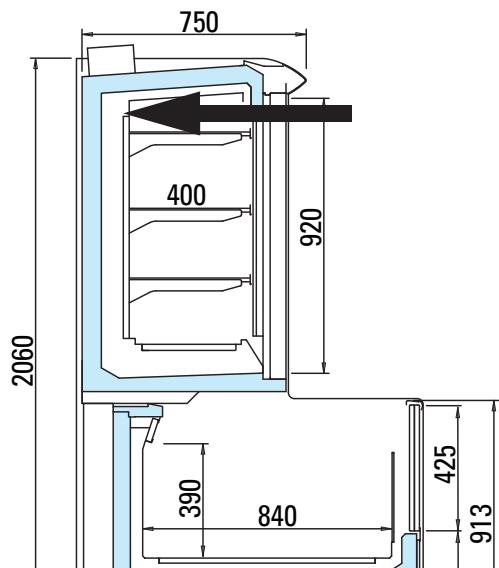


G4



2

1	arneG	6	10	8	ARNEG S.p.A. VIA VENEZIA 58 - CAMPO SAN MARTINO - PADOVA - ITALY Tel. +39 049 9699333 Fax +39 049 9699444 - info@arneg.it			
2		2			CODICE ITEM	3	MATRICOLA S/N	4
3						5	W	7
5	V		Hz		SBRINAMENTO DEFROSTING	9		15
9					SUPERF.ESP. DISPLAY AREA	11	W	
11					REFRIGERANTE	12	IP	
12	REFRIGERANT				CLASSE	14		
14	CLASSE				MASSA	13		
16	COMMESSA W.SCHED				WEIGHT			
17								
18								
	CE							



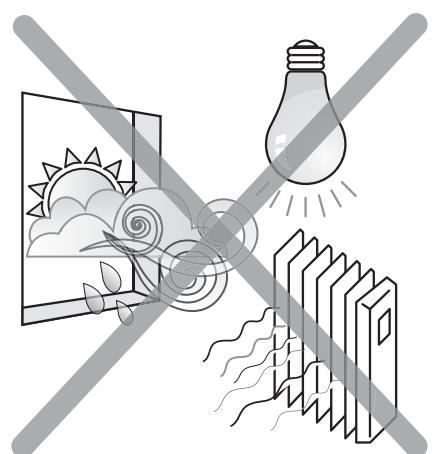
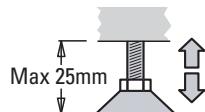
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Rif. 1

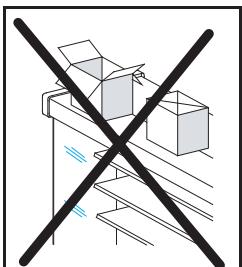


Rif. 2



**4****5**

Rif. 3



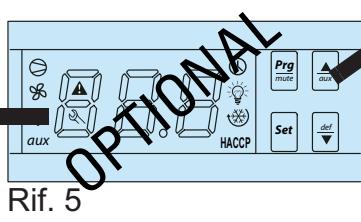
Rif. 6



Rif. 7



Rif. 4

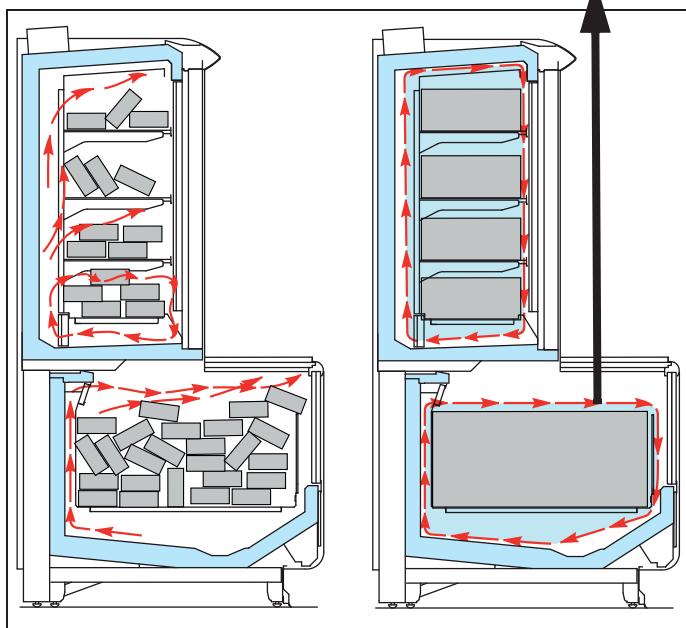


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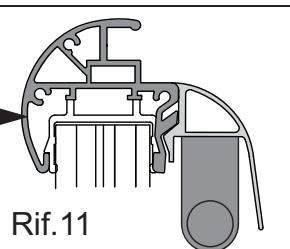


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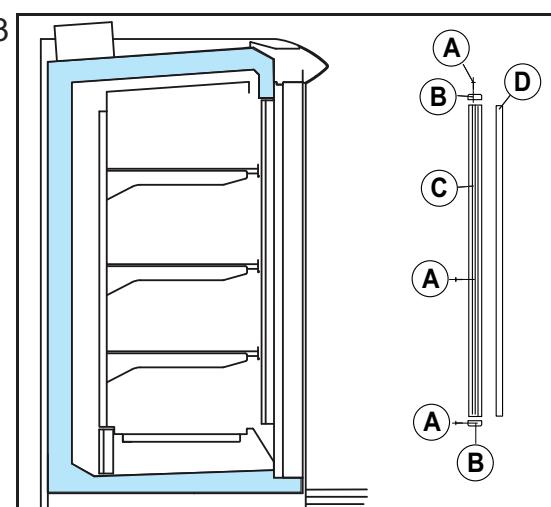
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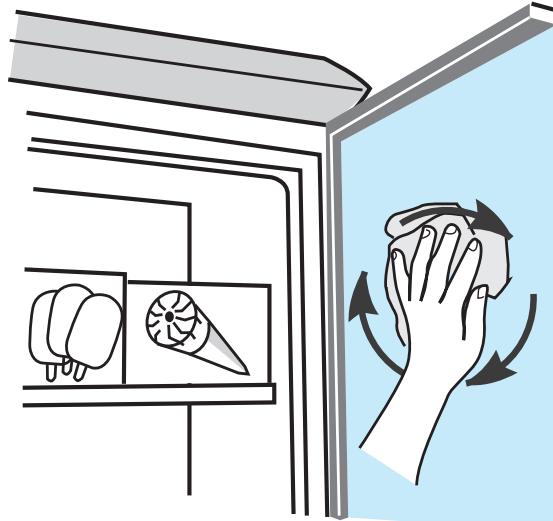
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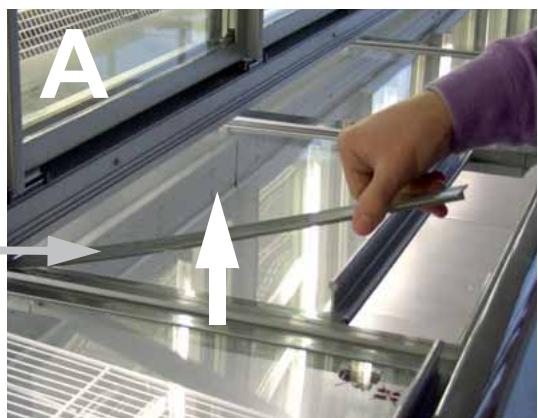
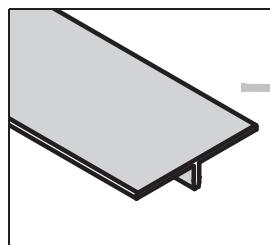
Rif.11



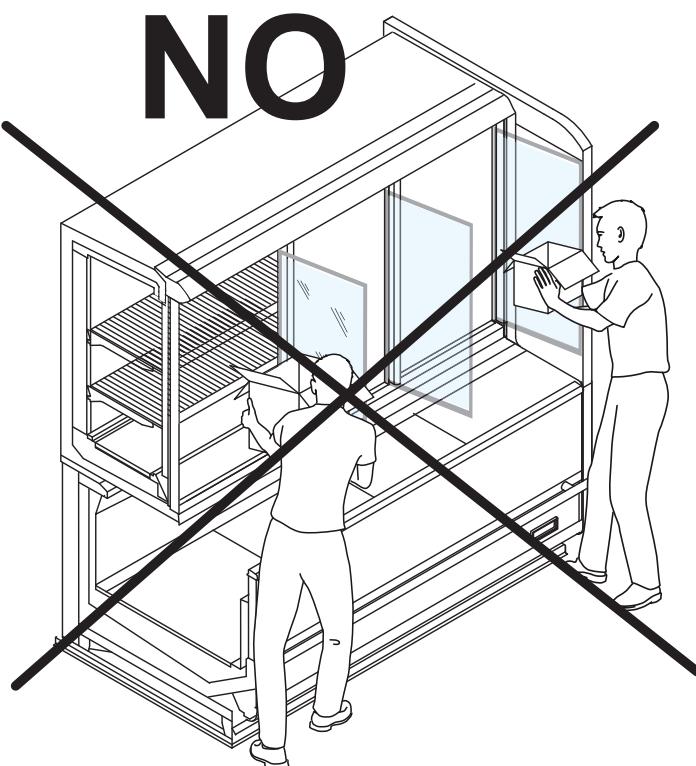
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**CAUTION!!**

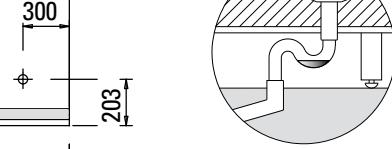
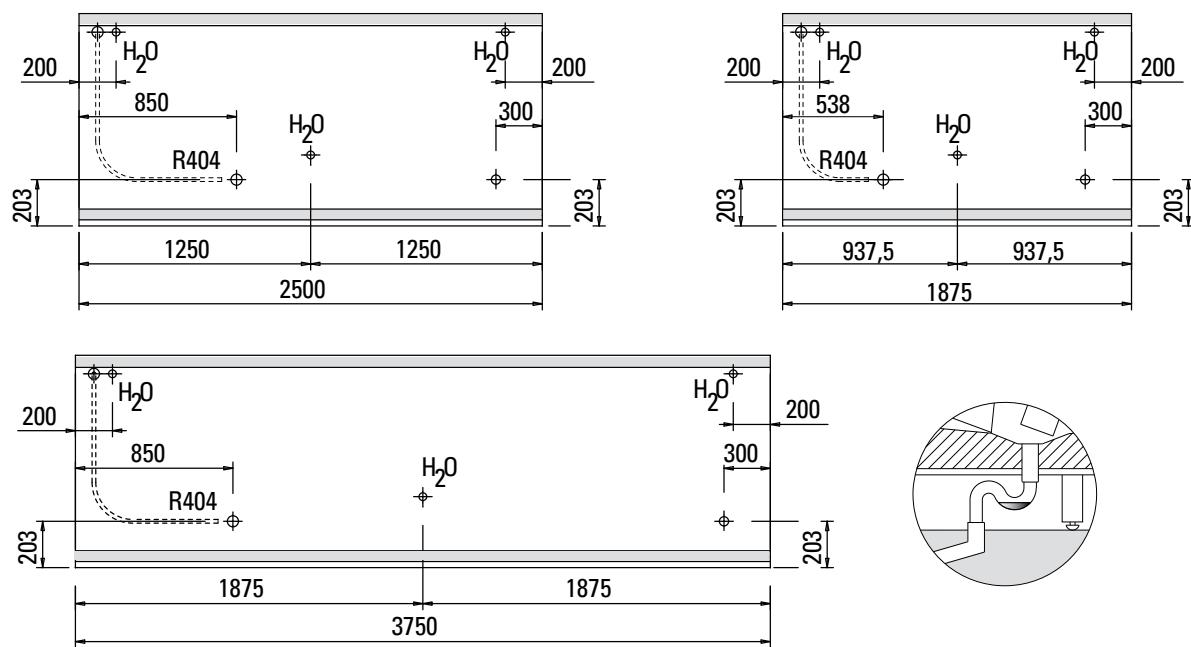
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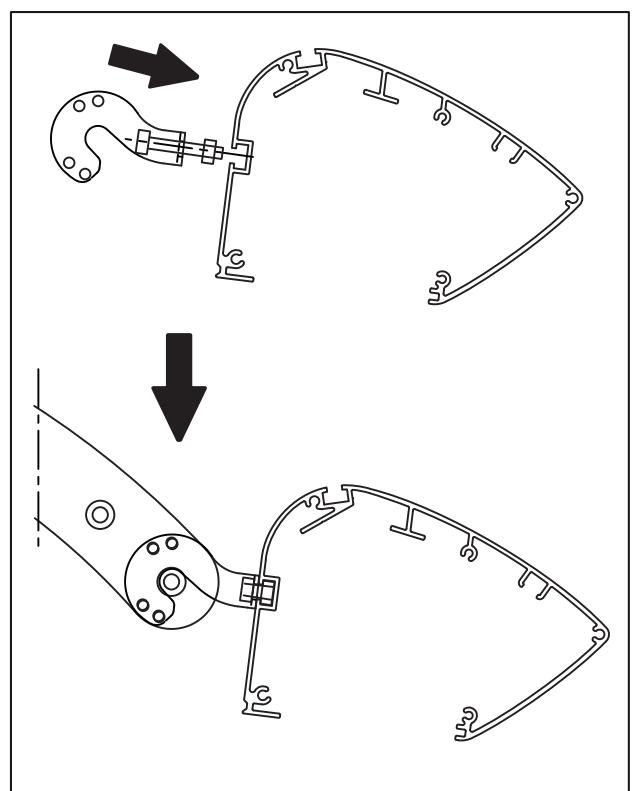
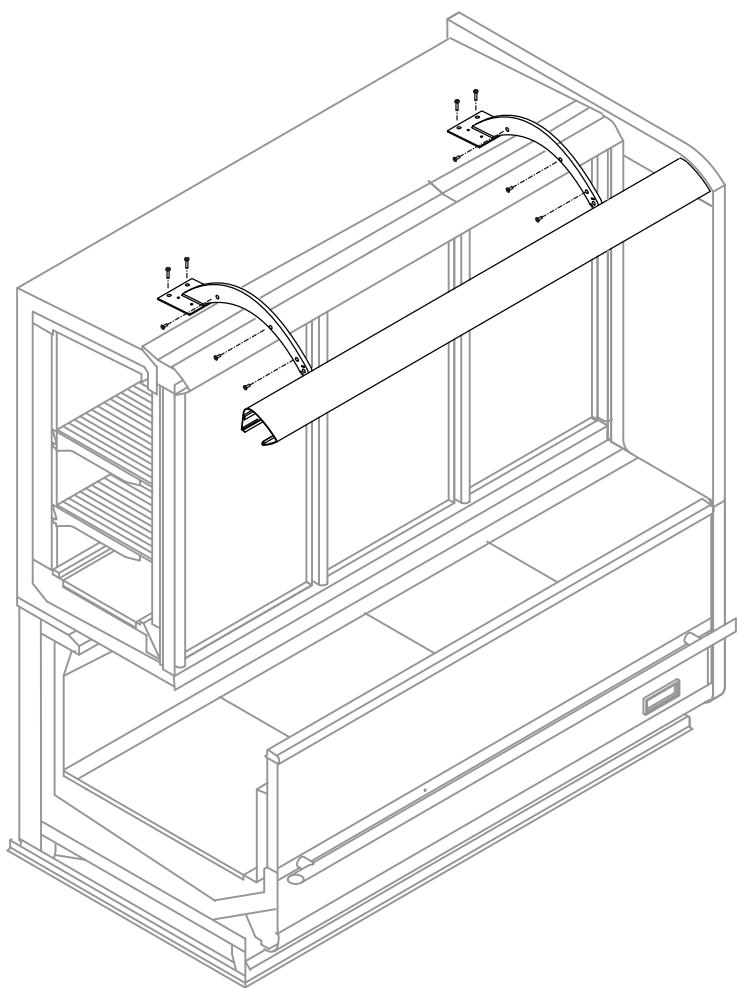
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**OK****NO**

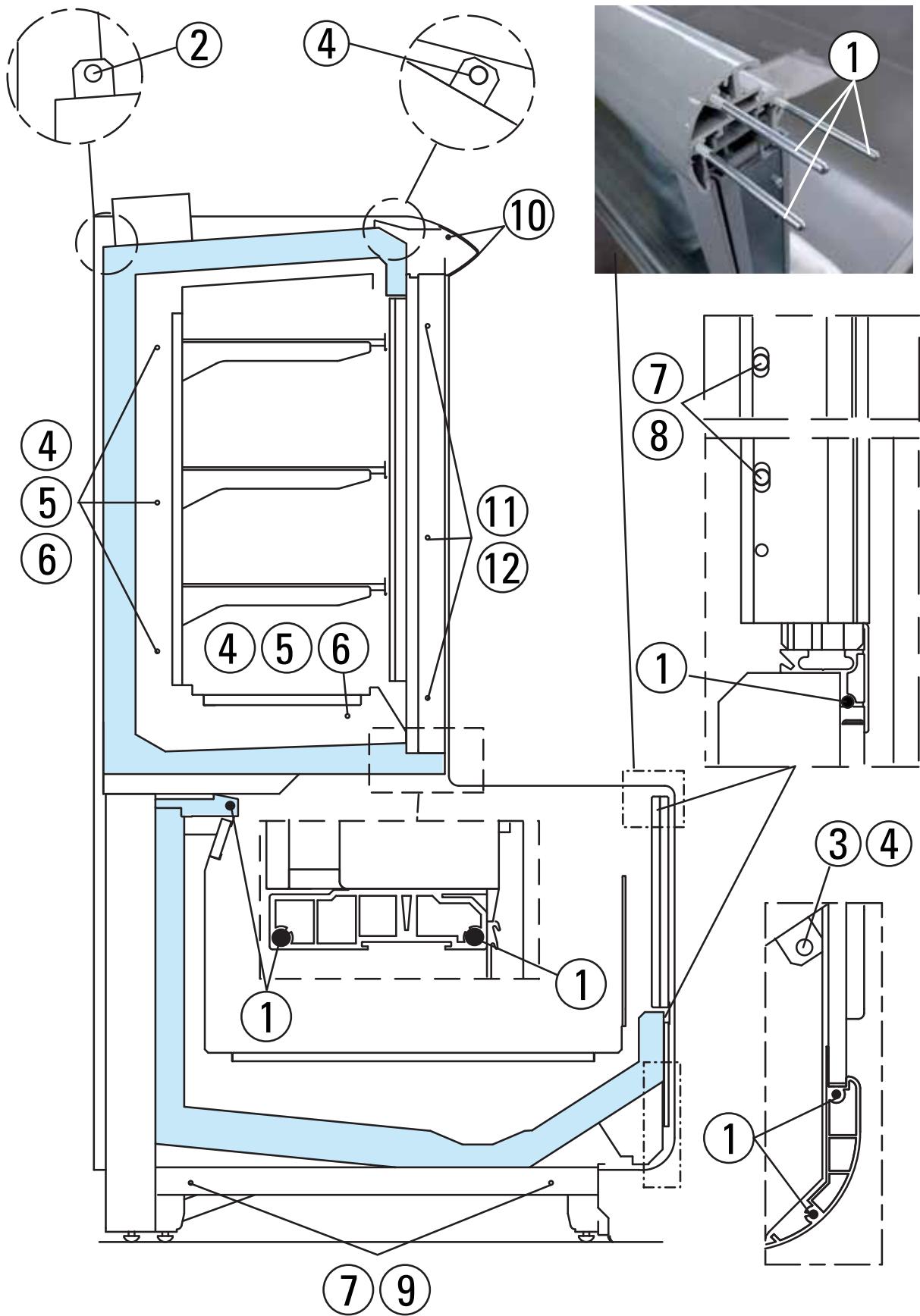
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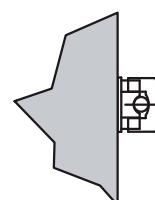
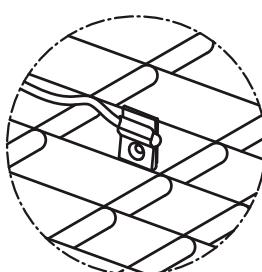
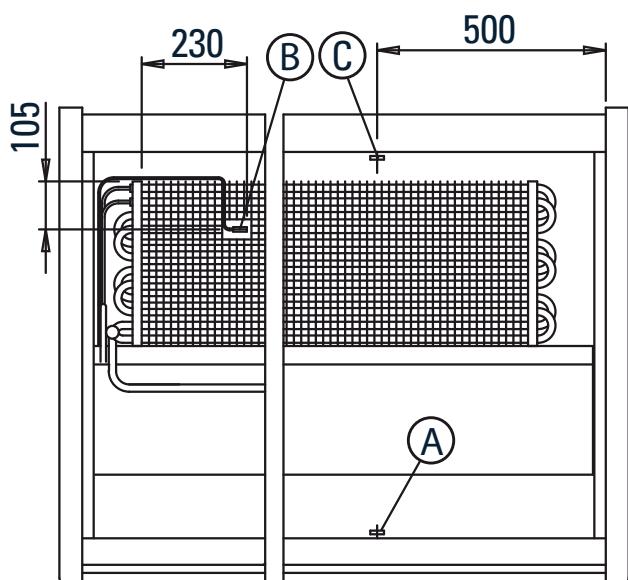
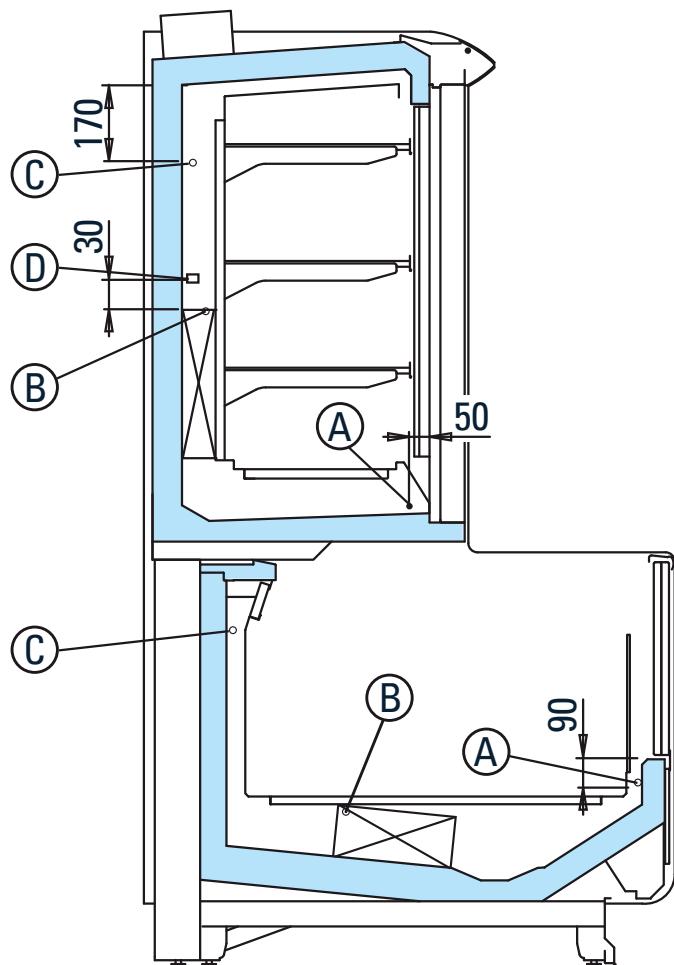
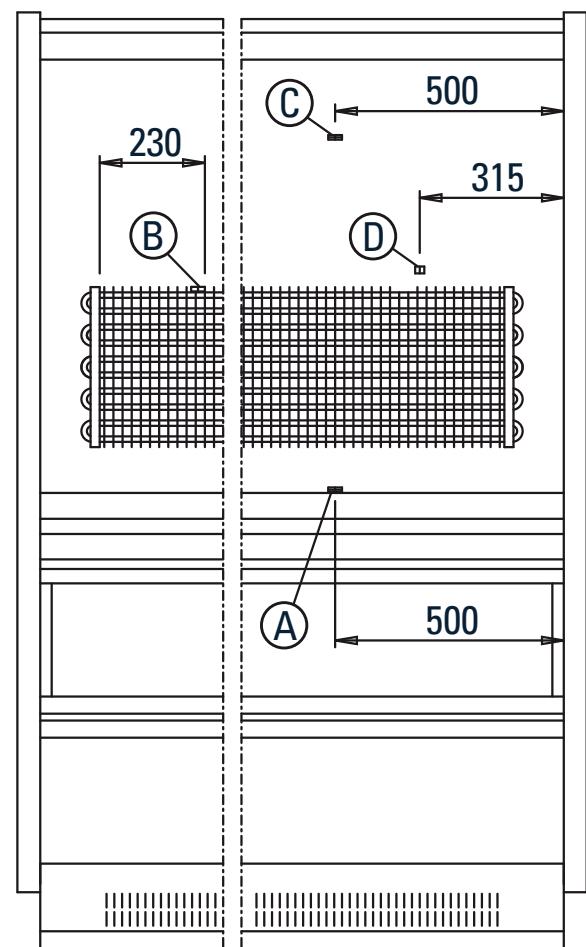
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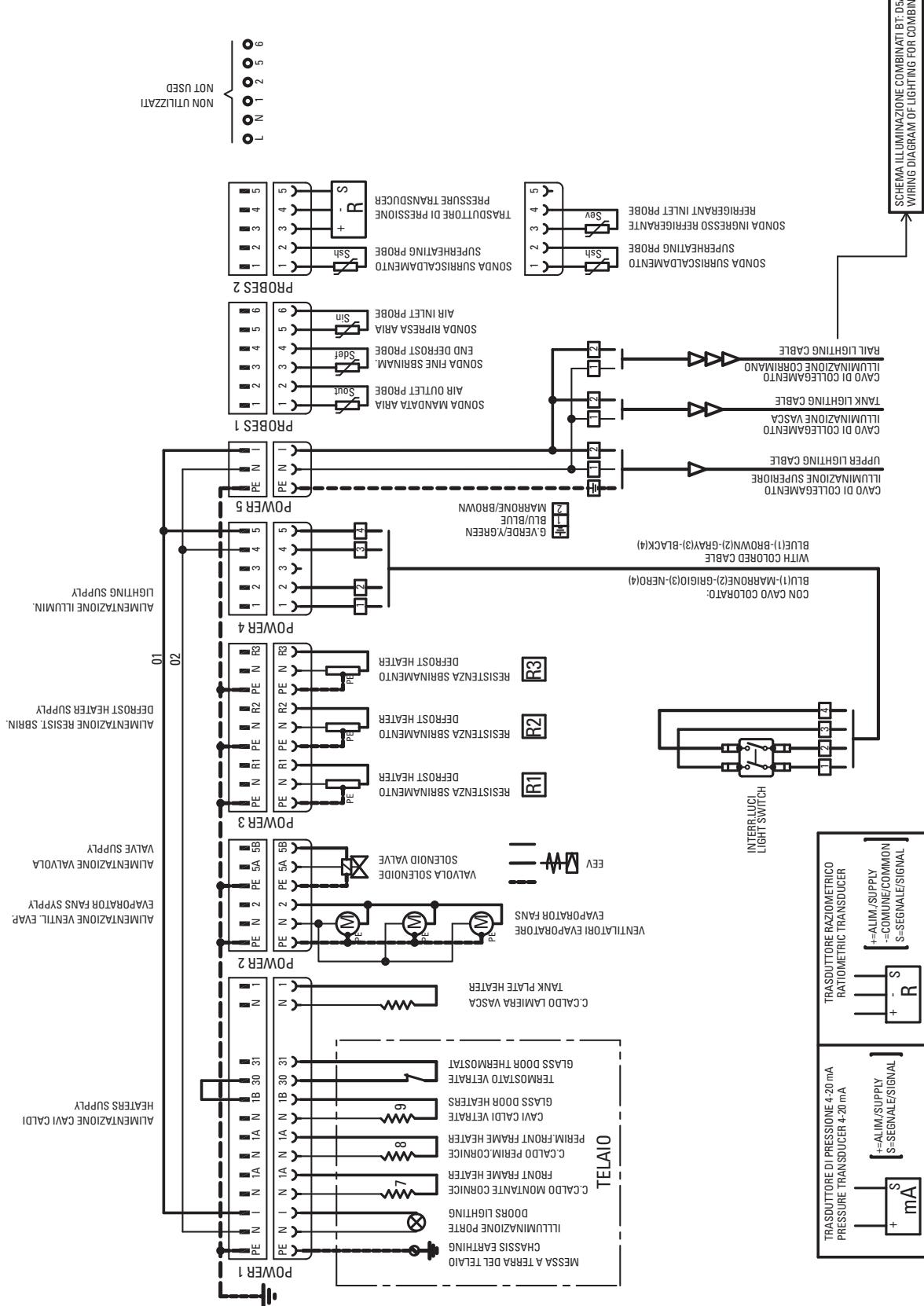
**A-C**

**A** = Sonda aspirazione aria  
**B** = Sonda fine sbrinamento  
**C** = Sonda aria mandata  
**D** = Termostato sicurezza cavi caldi porte

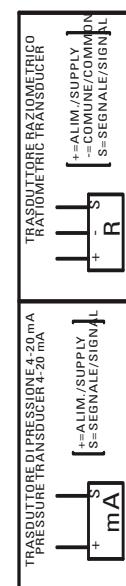
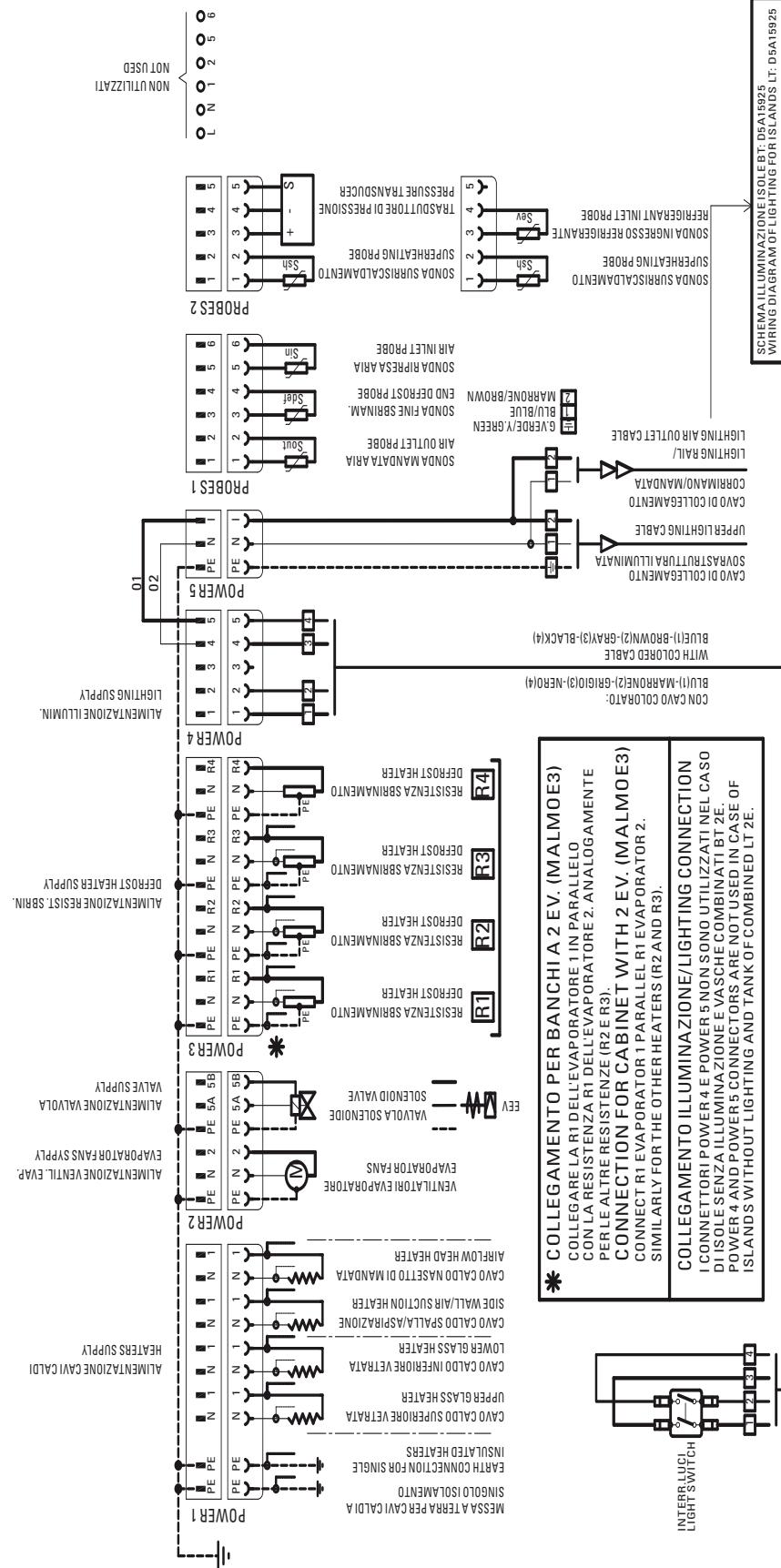
**A** = Air IN probe  
**B** = End-defrost probe  
**C** = Air OUT probe  
**D** = Door heating cables safety thermostat

Sonda di temperatura / Temperature probe Sacet/CAREL L=4000 cod.04510153

## **SCHEMA ELETTRICO SOVRASTRUTTURA SOLO MORSETTIERA/ ONLY TERMINAL BLOCK ELECTRIC PANEL FOR SUPERSTRUCTURE**

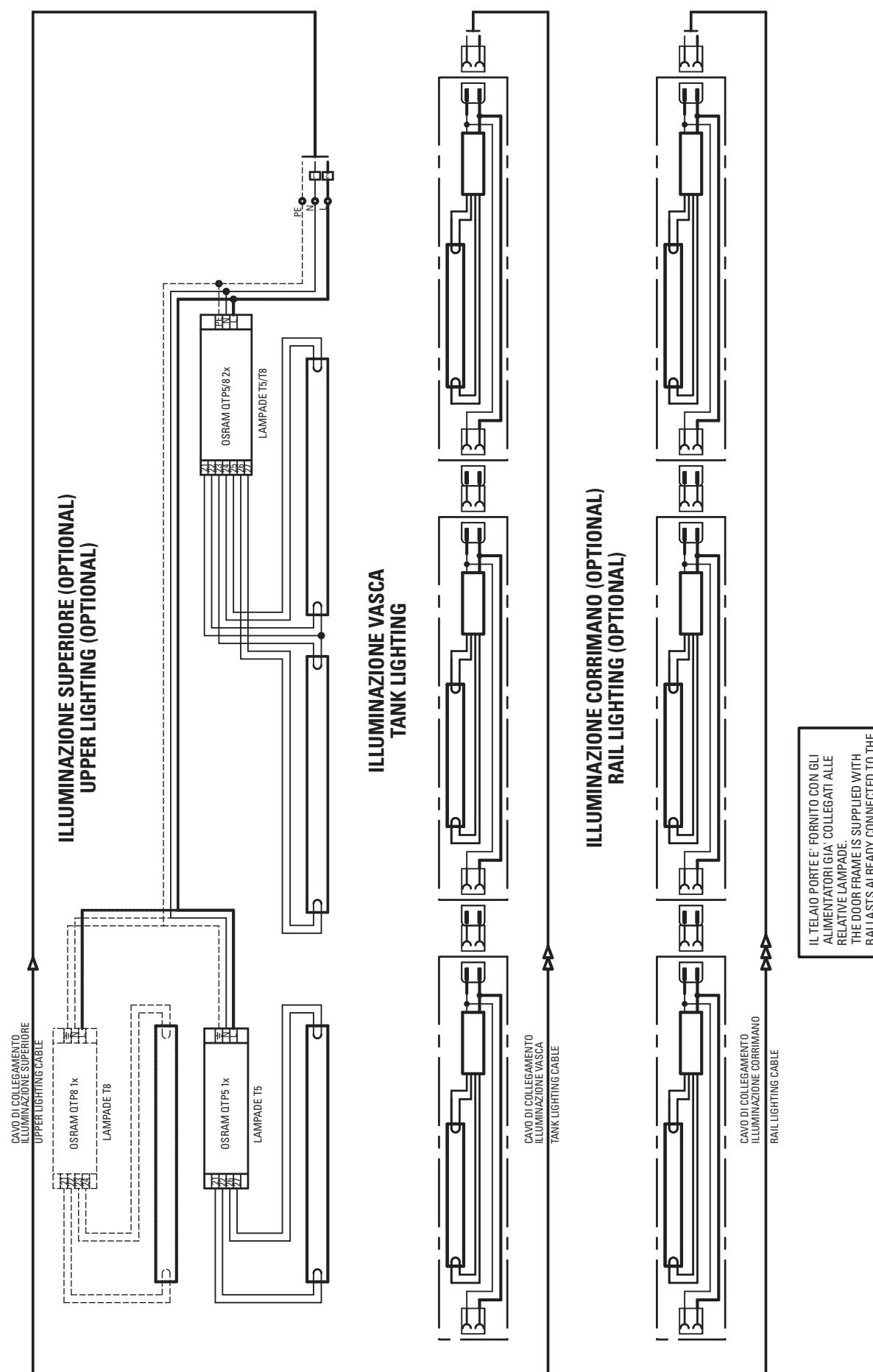


SCHEMÀ ELETTRICO SOLO MORSSETTERA VASCA STANDARD / ONLY TERMINAL BLOCK ELECTRIC PANEL FOR BASIN



SCHEMA ILLUMINAZIONE ISOLE B : U5A15925  
WIRING DIAGRAM OF LIGHTING FOR ISLANDS LT: D5A15925

15



## Dati Tecnici, Technical Data, Technische Daten, Données techniques, Datos Técnicos, Технические характеристики

Modello, Model, Modell, Modelo, Modelo, Модель		G3 H205		G3 H216	
Codice, Code, Kode nr., Code, Código, Код	vasca basin	sportelli doors	vasca basin	sportelli doors	vasca basin
Lunghezza senza spalle, Length without ends, Länge ohne Seiten, Longeur sans jupes, Longitud sin laterales, Длина без боковин	06256404	06256406	06256409	062564081	06257204
Tempo di esercizio, Working temperature, Betriebstemperatur, Temp. de fonctionnement, Temperatura de trabajo, Рабочая температура	mm	1875	2500	3750	TST
Temperatura ammisiibile, Allowed temperature, Zulässige Temperatur, Températures admissibles, Temperatura admittidas, Допустимые температуры.	°C				-18°C / -25°C
Max + 32°C / Min - 35°C					
Superficie di esposizione orizzontale totale, Total horizontal display surface, Gesamte Ausstellfläche, Surface d'exposition horizontale totale, Superficie de exposición de apoyo total, Горизонтальная площадь экспозиции	m <sup>2</sup>	4,53	6,05	9,07	
Volume netto, Net volume, Netto inhalt, Volume net, Volumen neto, Чистый вес	dm <sup>3</sup>				
Potenza frigorifera, Refrigeration Power, Kühleistung, Puissance frigorifique	W	444	557	593	743
Refrigerante, Refrigerant, Kühlmittel, Réfrigérant, Refrigerante, Хладагент					
Massima pressione ammisiibile, Max allowed pressure, Maximal zulässiger Druck, Pressure máxima admisible, Max allowed pressure, Máxima presión admisible, Максимально допустимое давление. - (Ps) 97/23 CE -	bar				29 bar
Valvola espansione, Expansion Valve, Expansion-Ventil, Valve d'expansion, Válvula de expansión, Расширительный клапан					TISE-SW
Ventilatori, Fans, Gebläse, Ventiladores, Ventiladores, Вентиляторы	n° x W	2x22	4x16	2x22	4x16
Cavi caldi anticondensa, Anti-condensation hot cables, Kondenswasserschutzvarmkkabel, Câble chauffant anti-condensation, Resistencias anticongelamiento, Нагревательные кабели при оттепляющие образования конденсата	W	130,1	494,6	169,8	656,2
Resistencia di stirnamento, Defrost heater, Abtauwiderstand, Resistance de dégivrage, Resistencias de descongelación, Мощность оттавивания	W	1425	1600	1950	2140
Tipo di stirnamento, Defrosting type, Abtauart, Type de dégivrage, Тип descongelation, Тип оттавивания					Automatico/Elettrico - Automatic/Electrical - Automatisch/Elektrisch - Automatique/Electrique - Automático/Electrico - Автоматическое/Электрическое
Shrinamenti consigliati, Recommended Defrosting, Empfohlene Abtauungen, Dégivrages conseillés, Descongelaciones aconsejadas, Рекомендемые оттавивания	n°/24h				sportelli/doors: 2x45', vasca/basin: 3x45'
Livello di rumorosità, Noise level, Schallpegel, Niveau de bruit, Nivel de ruido, Уровень шума	db (A)				≤ 60
Contenuto modificabile senza preavviso, Content that could be change without notice, Inhalt Veränderbar ohne Vorankündigung, Contenu modifiable sans préavis, Contenido modificable sin previo aviso, Содержание изменяется без предупреждения					

Modello, Model, Modell, Modelo, Modello, Модель		G4 H205		G4 H216	
Codice, Code, Kode nr., Code, Código, Код	vasca basin	sportelli doors	vasca basin	sportelli doors	vasca basin
Lunghezza senza spalle, Length without ends, Länge ohne Seiten, Longeur sans jupes, Longitud sin laterales, Длина без боковин	06256804	06256806	06256809	06256881	06257604
Temp. di esercizio, Working temperature, Betriebstemperatur, Temp. de fonctionnement, Temperature de travail, Рабочая температура	mm	1875	2500	3750	TST
Temperatures admissibles, Temperature admittidas, Допустимые температуры.	°C				-18°C / -25°C
- (Ts) 9/23 CE -					Max + 32°C / Min - 35°C
Superficie di esposizione orizzontale totale, Total horizontal display surface, Gesamte Ausstellfläche, Surface d'exposition horizontale totale, Superficie de exposición de apoyo total, Горизонтальная площадь экспозиции	m <sup>2</sup>	4,53	6,05	9,07	
Volume netto, Net volume, Netto inhalt, Volume net, Volumen neto, Чистый вес	dm <sup>3</sup>				
Potenza frigorifera, Refrigeration Power, Kühlleistung, Puissance frigorifique	W	463	557	618	743
Refrigerante, Refrigerant, Kühlmittel, Réfrigérant, Refrigerante, Хладагент					
Massima pressione ammissibile, Max allowed pressure, Maximal zulässiger Druck, Pressure maximale admissible, Maxima presión admisible, Максимально допустимое давление. - (Ps) 97/23 CE -	bar				29 bar
Valvola espansione, Expansion Valve, Expansion-Ventil, Valve d'expansion, Válvula de expansión, Расширительный клапан					TISE-SW
Ventilatori, Fans, Gebläse, Ventiladores, Ventiladores, Вентиляторы	n° x W	2x22	4x16	2x22	4x16
Cavi caldi anticondensa, Anti-condensation hot cables, Kondenswasserschutzwarmkabel, Câble chauffant anti-condensation, Resistencias anticongelamiento, Нагревательные кабели противрающиеся образование конденсата	W	130,1	494,6	169,8	656,2
Resistencia di stirnamento, Defrost heater, Abtauwiderstand, Resistance de dégivrage, Resistencias de descongelación, Мощность оттавивания	W	1425	1600	1950	2140
Tipo di stirnamento, Defrosting type, Abtauart, Type de dégivrage, Тип descongelation, Тип оттавивания					Automatico/Elettrico - Automático/Electrónico - Automatisch/Elektrisch - Automatique/Electrique - Automático/Electrico - Автоматическое/Электрическое
Stirnamenti consigliati, Recommended Defrosting, Empfohlene Abtauungen, Dégivrages conseillés, Descongelaciones aconsejadas, Рекомендуемые оттавивания	n°/24h				Sportelli/doors: 2x45', vasca/basin: 3x45'
Livello di rumorosità, Noise level, Schallpegel, Niveau de bruit, Nivel de ruido, Уровень шума	db (A)				≤ 60
Contenuto modificabile senza preavviso, Content that could be change without notice, Inhalt Veränderbar ohne Vorankündigung, Contenu modifiable sans préavis, Contenido modificable sin previo aviso, Содержание изменяется без предупреждения					

# Use and installation manual

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## 1. Introduction - Manual purpose/Field of application

This instruction manual is for the refrigeration unit line **Pelican**.

The following information aims to provide instructions with regard to:

Unit use - technical characteristics - installation and assembly - information for users - maintenance work. The manual should be considered part of the unit and must be kept for its entire working life.

### **The manufacturer is relieved from all liability in the following situations:**

Improper use of the unit - incorrect installation, not completed in accordance with the regulations specified - electrical supply flaws - serious lack of maintenance - unauthorised alterations and work - use of non-original spare parts - partial or complete lack of compliance with the instructions.

The manual must be available to operators and maintenance staff for consultation at all times. In the event of transfer to third parties, it must be delivered to the new user or owner, duly informing the suppliers in a timely manner.

If lost or damaged, please contact the supplier.

### **Anyone using this unit must read this manual.**

**Note: Electrical appliances can be dangerous to health. Current laws and regulations must be applied during installation and use.**

## 2. Presentation - Intended purpose (Fig. 1)

The refrigeration unit line **Pelican** consists of vertical wall display units with remote condenser unit, perfect for the storage and self service sale of frozen foods and ice cream.

The cabinet consists of two independent units: a lower cabinet (tank) fitted with sliding glass doors that allow for significant energy savings and better food storage, and an upper, multi-shelf cabinet (superstructure) that is closed by leaf doors to the front.

The two parts are equipped with their own evaporator and separate air control system.

## 3. Standards and certifications

All the refrigerated unit models described in this user's manual for the **Pelican** series meet basic health, safety and protection requirements set out by the following European laws and directives:

### **- Machines Directive 2006/42 EC;**

harmonised standards applied: EN ISO 14121:2007; EN ISO 12100-1:2005; EN ISO 12100-2:2003

### **- Electromagnetic Compatibility Directive 2004/108/EC;**

harmonised standards applied: EN 61000-3-2:2006; EN 61000-3-12:2005; EN 55014-1:2006;

EN 55014-2:1997;

### **- Low Voltage Directive 2006/95/EC;**

harmonised standards applied: EN 60335-1:2008; EN 60335-2-89 :2002/A2:2007

### **European Regulation EC-1935/2004** on materials and articles intended to come into contact with food

- standards applied: EN 1672-2

They are excluded from the field of application of Directive **EEC 97/23 (PED)** on the basis of that specified by Article 3 paragraph 3 of the Directive.

**A copy of the declaration of product conformity can be requested by filling in the form available at the internet address:**

<http://www.arneg.it/conformity>

The performance of these refrigerated units has been determined by means of tests carried out in accordance with standard **UNI EN ISO 23953-2: 2006** in the environmental conditions corresponding to climate class 3 (25 °C , 60% Rel. Humidity)

### **Environmental climatic classes according to UNI EN ISO 23953 - 2**

Climatic class	Temp. dry bulb	Relative humidity	Dew point
1	16?	80%	12?
2	22?	65%	15?
3	25?	60%	17?
4	30?	55%	20?
5	40?	40%	24?
6	27?	70%	21?

## 4. Identification - Plate data (Fig. 2)

A serial plate is affixed behind the units, stating all characteristic data:

- 1) Manufacturer's name and address
- 2) Unit name and length
- 3) Unit code
- 4) Unit serial number
- 5) Voltage supply
- 6) Supply frequency
- 7) Current used when operating
- 8) Electrical power used when operating during refrigeration phase (Lighting + fans + hot cables)
- 9) Electrical power used when operating during defrost phase (Lighting + fans + hot cables + defrost resistances)
- 10) Lighting power (where applicable)
- 11) Net display surface
- 12) Useful load volume
- 13) Type of refrigerant fluid with which the system functions
- 14) Environmental climatic class and temperature of reference
- 15) Humidity protection class
- 16) Unit manufacturing order number
- 17) Unit production order number
- 18) Unit year of production

To identify the unit when requesting technical assistance, you need simply provide the following:

- the product name(2); the serial number (4); the order number (16)

## 5. Transport (Fig. 3)

The cabinets are supplied on a wooden support fixed to the base for movement with forklift trucks. **Always position the forks at the point specified on the wooden support to avoid the risk of overturning.** Use a manual or electrical forklift truck that is suitable to moving the cabinet in question. It must have a nominal capacity of at least 1,000 kg.

## 6. Acceptance and first cleaning

Upon acceptance of the cabinet:

- ensure that the packaging is intact and there is no obvious damage;
- unpack, ensuring you do not damage the cabinet;
- check all parts of the cabinet, ensuring that all parts are intact;
- should damage be reported, call the supplier immediately;
- clean for the first time using neutral products. Dry with a soft cloth. Do not use any abrasive substances or metal sponges;
- do not use alcohol or similar to clean the methacrylate parts (Plexiglas).**

For correct disposal of the packaging, please consider that it consists of:

Wood - Polystyrene - Polythene - PVC - Cardboard.

In accordance with Directive EEC 94/62, we declare the suitability of the above-specified materials.

## 7. Installation and environmental conditions(Fig. 3)

Do not position the cabinet:

- in environments with the presence of explosive gaseous substances;
- outdoors and therefore where there are atmospheric agents;
- near heat sources (direct sunlight, heating systems, incandescent lights, etc.)
- near air currents (near doors, windows, air-conditioning/heating systems, etc.) exceeding speeds of 0.2 m/sec.
- remove the wooden supports at the base (used for transport) and assemble the adjustable feet (Rif. 2), positioning them in such a way as to bring the unit to a horizontal position. Use a spirit level (Rif. 1) to check this. If the unit is moved, repeat the spirit level check.
- before connecting the unit up to the electricity, ensure that the plate data corresponds to the characteristics of the electrical system to which it is to be connected.
- for correct unit operation, the environmental relative humidity and temperature must be in line with the parameters specified by standards **EN ISO 23953 -1/2**, namely Climatic Class 3 (+25°C; U.R. 60%).

- check that the ventilation apertures of the condenser unit are not blocked - version with built-in unit.

**ATTENTION!:** Multiplex up to 3 cabinets on the same electrical and refrigeration supply line (1 master + 2 slaves)

**Note:**All these operations should be performed by specialised technical personnel.

## 8. Multiplexing of cabinets (Fig. 11)

To multiplex two or more cabinets, act as follows:

- Remove the sides
- Position the cabinets side by side
- Remove the back panels to gain access to the rise holes
- Join the rises and brackets using the screws supplied
- Replace the back panels.

### MULTIPLEX KIT

Ref.	Code	Q.ty	Description
1	02940652	8	Handrail alignment plug D 4
2	04711030	2	Screws TCEI M8X80
3	04711041	1	Screws TCEI M8X50
4	04230600	7	Hexagonal nut M8
5	04711040	4	Screws TCEI M8X35
6	04480112	8	Washer D 8.5x24
7	04711098	4	Screws TCEI M8X25
8	04230400	2	Hexagonal nut M6
9	04480103	4	Washer D 6x12
10	02940045	2	Lamp alignment plug D 3
11	04715051	3	Screws TC M5X25
12	04231100	3	Hexagonal nut M5

## 9. Electrical connection (Fig. 13 - Fig. 14 - Fig. 15)

**- the electrical system must be earthed.**

- First check that the voltage supply is as specified on the plate data (Fig. 2)
- The unit must be protected upstream by an automatic omnipolar thermomagnetic switch with appropriate characteristics. This must also act as a general line disconnection switch.
- Instruct the operator as to the switch position in order that it can be reached quickly in an EMERGENCY.
- To guarantee correct operation, the maximum voltage variation must be between +/- 6% of the nominal value.
- Check that the power line has appropriate section cables, is protected against overcurrent and dispersions towards earth, in compliance with current standards.
- The installer must supply the anchorage devices for all cables in and out of the unit.
- For power lines exceeding 4-5 metres in length, increase the cable section accordingly.
- In the event of an interruption to the electricity supply, check that all store electrical appliances can reboot without causing the overload protections to intervene. If not, alter the system in order to differentiate between the start-up of the various devices.
- The installer must supply the anchorage devices for all cables in and out of the unit
- The automatic thermomagnetic switch must be such as not to open the circuit on neutral, without simultaneously opening it on the phases. In any case, the opening distance of contacts must be at least 3 mm.

**Note:**All these operations should be performed by specialised technical personnel.

## 10. Probe positioning (Fig. 12)

- Temperature probe: NTC IP67 L=4000 code 04510153 .
- Probes A - C must be blocked using Betterman 6-17 terminals code 04355001 and must not be insulated.
- Probe B must be fixed in contact with the aluminium fins using the stainless steel bulb-holder spring code 02230134.

## 11. Temperature control and adjustment (Fig. 5)

The tank and superstructure have two separate temperature control systems.

Refrigeration temperature is controlled by means of the thermometer (Rif. 4) or the electronic control

device (Rif. 5 OPTIONAL) on the lower part of the cabinet (tank) or the upper part (rise) (Rif. 9). Normally the controller is set in the factory during testing, but it is possible to alter programming. To do so, please refer to the instructions given by the control device manufacturer.



### Economisers

If using electronic systems commonly referred to as 'economisers' (due to the door heating wire adjustment function), **these must be connected to the glass door power supply only**. Connecting the economisers to the frame heating wire power supply lines and not to the door ones may damage the wires and invalidate the product warranty.

**Frame wires must operate at full power.**

**Note:All these operations should be performed by specialised technical personnel.**

## 12. Unit loading (Fig. 5)

To refill the unit, you must comply with some important rules:

- arrange the goods in such a way that the maximum load line is never exceeded (Rif. 8) - exceeding this limit can interfere with correct air circulation (Rif. 12), causing the goods temperature to rise and ice to form on the evaporator;
- arrange the goods in a uniform, orderly fashion avoiding overloading the shelves (maximum load admissible **160 kg/m<sup>2</sup>**).
- the arrangement of goods, without leaving empty areas, guarantees optimum unit function.
- leave approximately 30 mm space between the goods and the shelf immediately above.
- we recommend using up the goods that have been stored in the unit for longest first, before the new arrivals (food stock rotation)
- The maximum load admissible in the tank is **300 kg/m<sup>2</sup>**
- Shelves can be angled in 2 different positions **0°; -10°**.



### ATTENTION!:

**To refill the superstructure:**

- **load the cabinet one door at a time;**
- **do not load the cabinet with all doors open at the same time;**
- **block the door open until loading is complete to avoid continuously opening and closing it, during this phase, keep the sliding cover below open to avoid condensation forming.**

**Do not load the cabinet roof with boxes, packages or other (Rif. 3)**

**Do not use the sliding doors as a resting plane for goods when loading. The doors have not been designed to support any loads (Rif. 6).**

## 12\_1. Loading of cabinets for ice cream and frozen foods

- reducing the time for which frozen foods are at environmental humidity and temperature to a minimum to avoid the formation of frost on the boxes, which can, once inside the cabinet, stick together and to the base grille.
- limit door opening time to 2-3 minutes
- keep 4-5 cm space between the goods and the air output mouths to allow for normal circulation of refrigerated air.

**Note:Hot air will inevitably enter the cabinet, if humidity levels are high, a thin layer of frost will form. This will disappear once the doors have been kept closed for 2 hours.**

**Note:The refrigeration unit is designed to maintain the temperature of the product displayed and not to lower it.**

**Food products must only be introduced if already cooled to their respective storage temperatures. DO NOT introduce products that have been heated.**

## 13. Defrost and water draining (Fig. 9)

The tank and superstructure are fitted with two automatic electrical defrost systems. These are separated by armoured electrical resistances inserted into each evaporator:

To drain the defrost water, you need to:

- set up a gently-sloping floor drain.
- install a siphon between the unit drainage pipe and the floor connection.
- hermetically seal the floor drainage area.

This will prevent unpleasant odours from forming within the unit, the dispersion of refrigerated air and possible unit malfunctioning due to humidity.

**Note: Call a qualified installer to check that the hydraulic connections are perfectly operative on a regular basis.**

## 14. Anti-condensation and fog resistance

To prevent fogging due to condensation, low voltage electrical resistances are used on the parts most subject to this, such as: heat-insulating glass on doors, structures and frames, side glass, etc.

## 15. Maintenance and cleaning (Fig. 6 - Fig. 7 - Fig. 8)



**ATTENZIONE!: BEFORE CARRYING OUT ANY MAINTENANCE WORK OR CLEANING, FIRST DISCONNECT THE UNIT FROM THE VOLTAGE SUPPLY BY MEANS OF THE GENERAL SWITCH. ALWAYS WEAR PROTECTIVE GLOVES FOR CLEANING.**



Food products can deteriorate due to microbes and bacteria. Compliance with hygiene rules and the cold chain is fundamental to guaranteeing protection of the consumer's health.

### Cleaning the external parts (Daily / Weekly)

- weekly cleaning of all the external parts of the unit, using neutral household cleaners or soap and water.
- rinse with clean water and dry using a soft cloth.
- DO NOT use abrasive products or solvents that can affect the unit surface.
- DO NOT spray water or detergent on the electrical parts of the unit.
- DO NOT use alcohol to clean the methacrylate parts (Plexiglas).**

### Cleaning of the internal parts (Monthly)

- remove all goods contained in the cabinet.
- remove all removable parts, such as display plates, grilles, etc.
- wash with warm water and a detergent/disinfectant and dry thoroughly.
- thoroughly clean the bottom tank.
- regularly clean the drip tray and drain, raising the fan sheet if necessary

To wash the cabinet's inner tank with running water, when installing the cabinet you will need to arrange for a fixed floor drain.

### Cleaning the tank's sliding doors (Fig. 7)

- raise the cover profile (fig. A)
- remove the cover (fig. B)
- clean as specified for the cleaning of external parts
- replace the covers
- reposition the cover profile



**ATTENTION!: If using a water jet cleaner to clean the interior, use a LOW PRESSURE system. Take special care NOT direct the jet onto painted or plasticised surfaces and keep a minimum distance of 30 cm from the surface to be cleaned (Fig. 4).**

## 16. Cleaning the EVERCLEAR doors (optional) (Fig. 6)

**ATTENTION!: EVERCLEAR doors are glass doors with a special transparent interior cover that prevents condensation from forming.**

To clean EVERCLEAR doors, keep to the following instructions:

- open and block the door
- carefully clean the interior with a soft, damp cloth appropriate to cleaning parts that may come into contact with food products**
- use neutral detergents or soap and water**
- change the cloth frequently
- close the door
- clean the exterior wall of the door using neutral household detergents or soap and water
- rinse with clean water and dry using a soft cloth

- DO NOT use abrasive products or solvents that can affect the door surface



**ATTENTION! DO NOT CLEAN THE DOOR INTERIOR WITH THE SAME PRODUCT USED TO CLEAN THE EXTERIOR. DO NOT USE ANY ABRASIVE PRODUCTS OR SOLVENTS THAT COULD AFFECT THE INTERIOR DOOR SURFACES. DELLE PORTE**

## 17. Lighting (Fig. 5 - Fig. 10)

For external lighting, a lighting system supplied with a modular fitting to be applied externally to the top of the cabinet is available as an optional extra (Rif. 10).

For tank front lighting, a lamp can be installed on the handrail (optional) (Rif. 11).

**OPTIONAL: For greater energy savings, the cabinet can be ordered complete with low consumption LED lighting. This allows for:**

- reduced lighting consumption
- reduced refrigerator load
- duration of lights: more than 6 years
- uniform lighting colour and intensity on all doors at all times
- improved lighting as temperature decreases.

## 18. Bulb replacement (Fig. 5 Rif. 13)

Replace the bulbs as follows:

- Disconnect the electricity supply from the cabinet.
- Remove fixing screws A from the protective casing.
- Remove caps B and protective casing C.
- Rotate bulb D by approximately 90° (until it clicks into place) and remove from the bulb-holder.
- Replace the bulb.
- Re-insert the casing and caps fixing them with the screws.
- Restore the electricity supply.

## 19. Disposal of the cabinet

The unit must be disposed of in accordance with your country's waste management legislation and in respect of our environment.

This product is considered by current legislation as hazardous waste. It must therefore be collected separately and cannot be treated as household waste nor sent to a landfill. Before disposing of the unit, the coolant must be collected and the lubricant oil removed. The user is responsible for delivering the product for disposal to the collection centre specified by the local authorities or manufacturer for the recovery and recycling of materials. This product consists of 75% recyclable materials.

Materials used to build the cabinet:

- Iron tube:	lower frame and support structure
- Copper, Aluminium:	refrigeration circuit, electrical system and door frame
- Galvanised sheet metal:	motor base, lower panels, varnished panels, base structure
- Polyurethane foam (CO <sub>2</sub> ):	heat insulation
- Tempered glass:	front glass and doors
- Wood:	side frames foamed tank
- PVC:	bumper
- Plastic laminate:	sides

**Note: All these operations as for transport and waste processing, should be performed by authorised, specialised personnel only.**

## 20. Useful advice

We recommend careful reading of the Use and installation manual to ensure that in the event of failure, the operator is able to provide Technical Assistance with the specific information required.

**Before carrying out any maintenance work on the refrigerator unit, please ensure that the electrical supply is disconnected.**

If a customer should note any anomaly in the unit function, before contacting the Assistance Service, check the following points:

- Take great care over all working manoeuvres (loading, unloading, cleaning, counter service, maintenance, etc.). and always apply maximum diligence, using appropriate protective equipment for the various operations.

- Take great care over all working manoeuvres (loading, unloading, cleaning, counter service, maintenance, etc.). Always use the personal protection equipment (PPE) provided for the operations to be performed.
- check that the environmental humidity and temperature values do not exceed those specified, always keep the sales outlet's air-conditioning, ventilation and heating systems at maximum efficiency.
- limit ambient air speed to below 0.2 m/s near unit openings. Ensure that air currents and air-conditioning system supply outlets are not directed towards unit openings.
- do not expose the goods displayed to direct sunlight.
- limit the temperature of the radiating surfaces in the sales outlet, for example by insulating ceilings.
- do not use spotlights with incandescent bulbs directed straight onto the unit.
- do not fully or partially block the air suction and delivery outlets.
- only place goods into the cabinet at the temperature normally applicable to the cold chain and check that the cabinet is always able to maintain that temperature.
- comply with the load limit, avoiding overloading the cabinet.
- rotate food products by loading the cabinet in such a way that the goods displayed for longest are sold before new arrivals.
- regularly monitor unit operating temperature and the temperature of the goods displayed (at least twice a day, including at weekends).
- in the event of a black-out, close the cabinet with the night shade. If the suspension of the electricity is scheduled, close the cabinet with the shades at least a couple of hours prior to this, preparing function for maximum operation.
- should the unit break down, immediately take all steps to ensure that the refrigerated goods do not overheat (replace in the main cell, etc.).
- immediately eliminate any problem found (loose screws, blown bulbs, etc.).
- regularly check the function of the unit automatic defrost (frequency, duration, air temperature, restoration of normal operation, etc.).
- check the outward flow of the water resulting from the defrost (free up the drains, clean any filters, check the siphons, etc.).
- if abnormal condensation forms, inform the refrigeration technician immediately.
- regularly carry out all preventative maintenance works.
- dispose of defrost water or water used for washing through the drains or purification system in accordance with current legislation as this may come into contact with pollutants due to the nature of the product, any residues, accidental breakages of casing containing liquids and the use of non-permitted detergents.
- **IN THE EVENT OF A GAS LEAK OR FIRE:** Do not stay in the room where the cabinet is positioned if it is not appropriately ventilated. Disconnect the unit by means of the general switch upstream of the appliance. **DO NOT USE WATER TO EXTINGUISH FLAMES. ONLY USE DRY EXTINGUISHERS.**
- **DO NOT** stand on the bumper rail

**ALL OTHER USE NOT SPECIFICALLY PROVIDED FOR IN THIS MANUAL SHOULD BE  
CONSIDERED DANGEROUS. THE MANUFACTURER CANNOT BE HELD LIABLE FOR  
DAMAGES CAUSED BY IMPROPER, INCORRECT AND UNREASONABLE USE.**

**USEFUL TELEPHONE NUMBERS: SWITCHBOARD +39 0499699333 - FAX +39 969944 - CALL  
CENTRE 848 800225**

## 1. Assembly indications for inverting the doors

### ATTENTION!: Cut off power supply to the cabinet before proceeding with all operations

Brema 5 - Brema LF refrigerated wall cabinet is normally supplied in the version with right-hand opening doors. If required, the direction of door opening can be inverted from right to left ..

**N.B. Is not possible to invert one or more doors individually.**

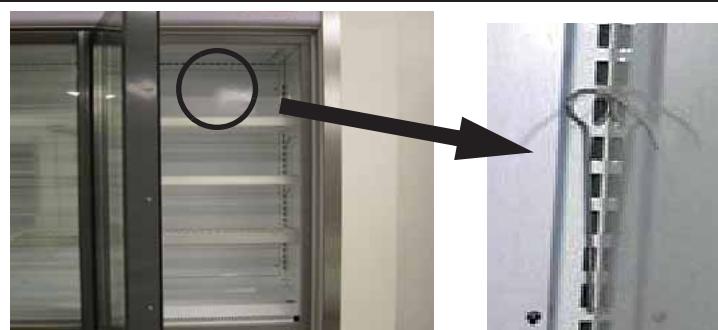
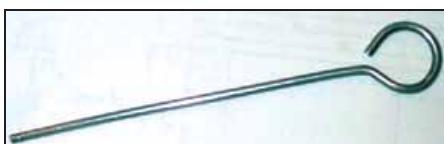
30 minutes are sufficient for this operation and the collaboration of 2 workers is recommended.

#### Equipment required:

Hammer - Spatula - Drill - Drill bit Dmax= 9mm - Pliers - Pliers for elastic rings - Hexagonal spanners 2/3/4 - Cross-head Screwdriver - Metal pipe / spacer .

In order to invert the doors, follow the indications below:

1 Detach the spring-loading spanner from its housing

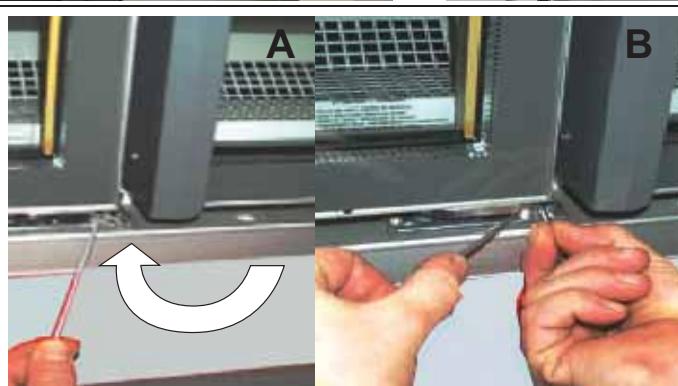


2 A) Insert the spring-loading spanner into one of the holes of the lower pin.

Insert the spring-loading spanner into one of the holes of the lower pin.

B) Keeping the spanner still in the position indicated, remove the spring-loading pin and place both the pin and the spanner in a safe place.

1 - Loading pin 2 - Spring-loading spanner

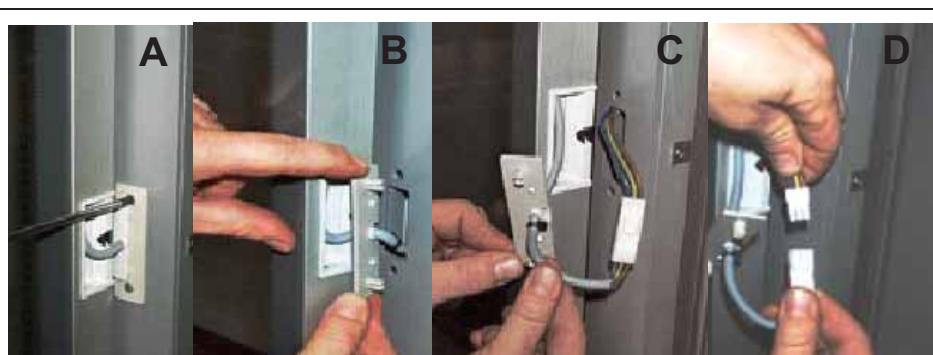


3 A) Remove the screws that fix the wiring protection plate in place.

B) Pull out the cable.

C) Pull out the connector

D) Open the connector



4 (referred to the right and left-hand risers).

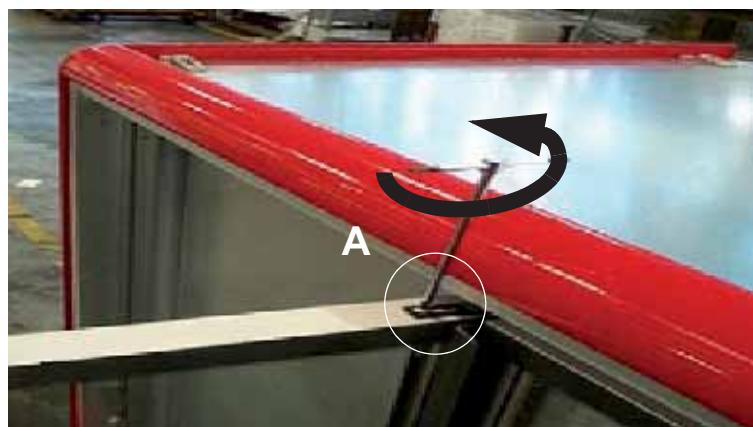
This phase applies both for dismantling the right-hand door and for preparing the left-hand rise.

A) Remove the side buffer profile using a spatula

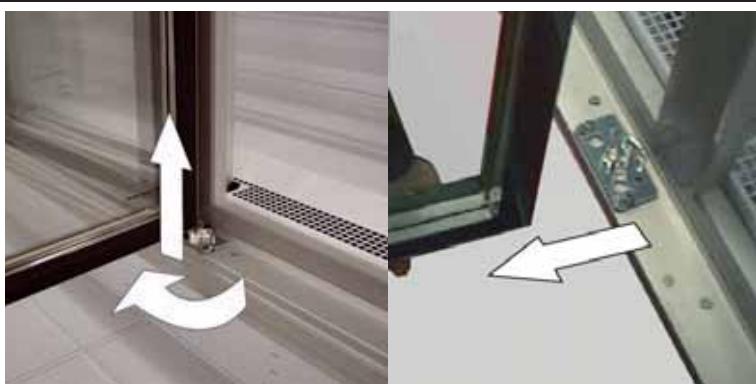
B) Pull out the cable and open the connector



5 Loosen the screws that fix the anti-fraying fork on the upper part of the door. Let the fork slide and rotate it as indicated in figure A:



6 In order to remove the door, it must be lifted and simultaneously rotated as indicated in the drawing so that it is first released from its housing on the bottom part. Given the weight of the door the collaboration of two workers is recommended.

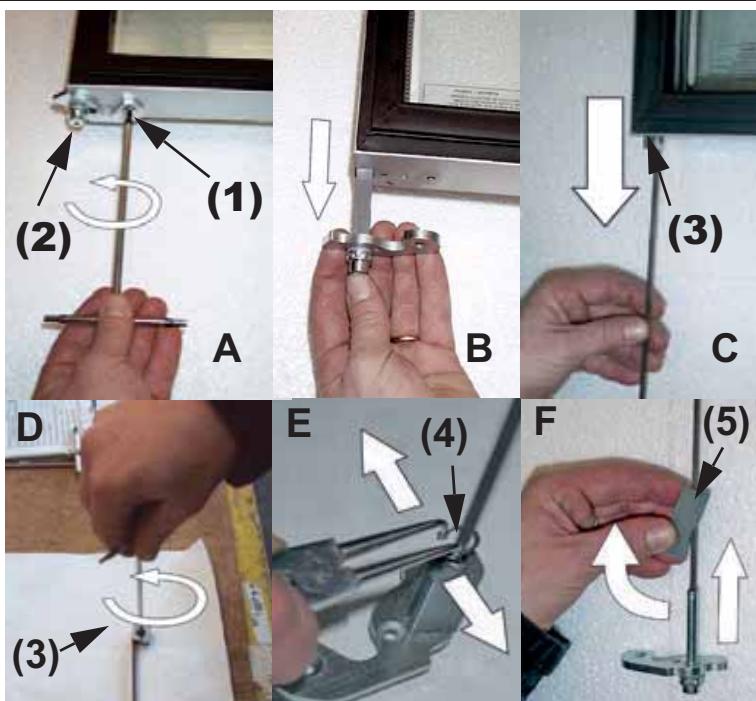


**N.B.** If difficulties are encountered while removing the door, use a lever in wood or other similar material so not to damage the door itself. Delicately lift the door a few millimetres so as to withdraw the pin of the lower hinge. **Do not exert unnecessary force**

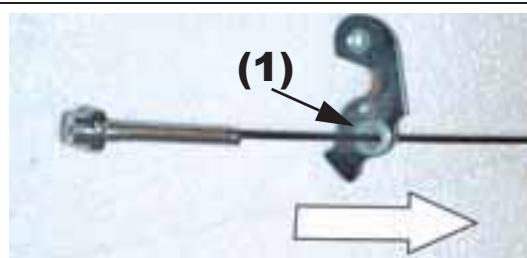


7 Remove the door and place it on a flat horizontal surface so as to carry out the inversion operation in the best way possible. Fully remove the entire lower hinge unit.

- A) Remove the screws (1) and (2) using the respective spanners
- B) Remove the lower hinge uni
- C) Withdraw everything, including the galvanised block
- D) Dismantle the galvanised block unit (3)
- E) Remove the elastic ring that holds the sleeve in place (4) using the appropriate pliers
- F) Remove the lower pin-guide sleeve (5)

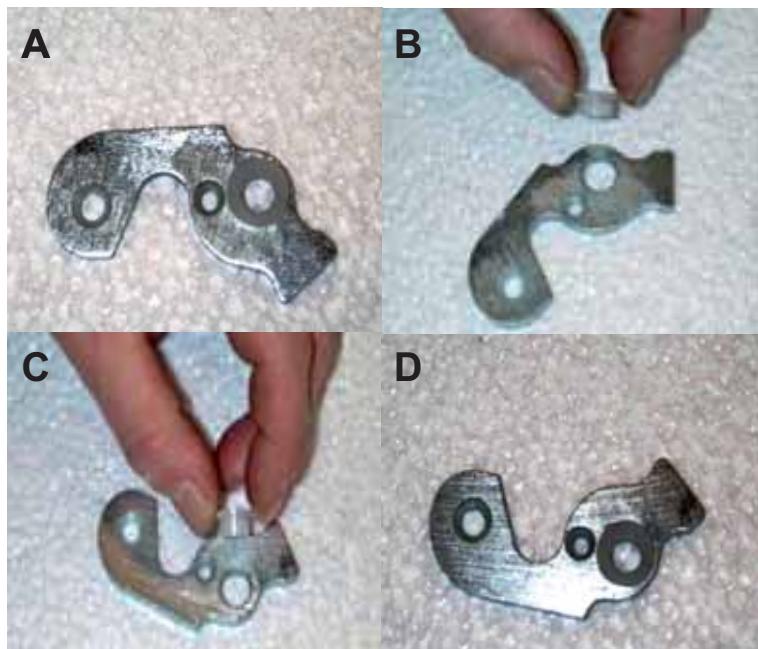


8 Remove the universal door-blocking bracket (1)

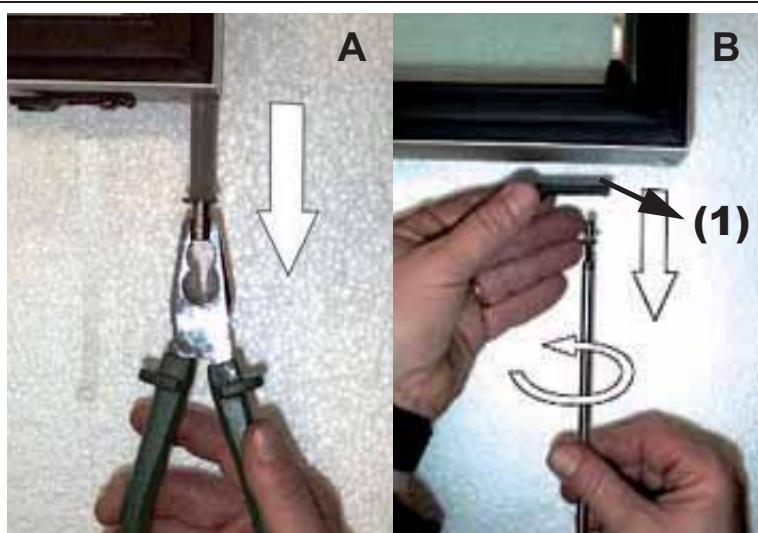


9 Transform the universal bracket from right to left.

A) Right-hand bracket  
 B) Remove the lower brass (1);  
 C) Turn the bracket upside down and insert the brass  
 D) Left-hand bracket.



10 A) With the utmost delicacy, remove the upper hinge from the upper part of the door, making sure not to exert excess stress on the coupling between the pin and the plastic bush;  
 B) Also dismantle the anti-fraying fork (1).

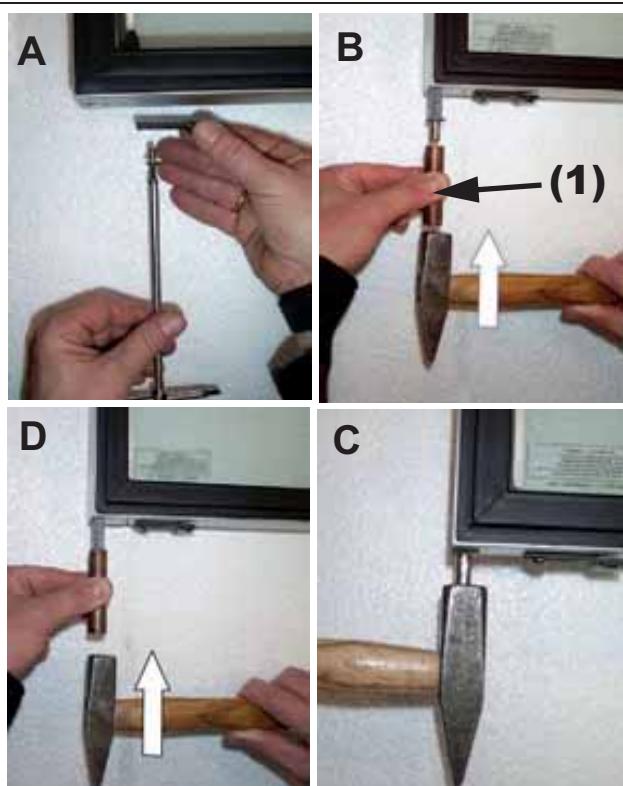
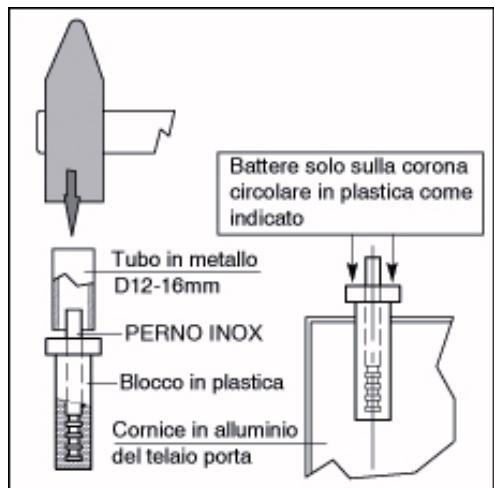


11 Re-mount the lower hinge unit, having now become a left-hand unit, following phases 8-9 backwards and insert it in place of the upper hinge.



12 Mount the upper hinge unit where the lower hinge was previously situated.

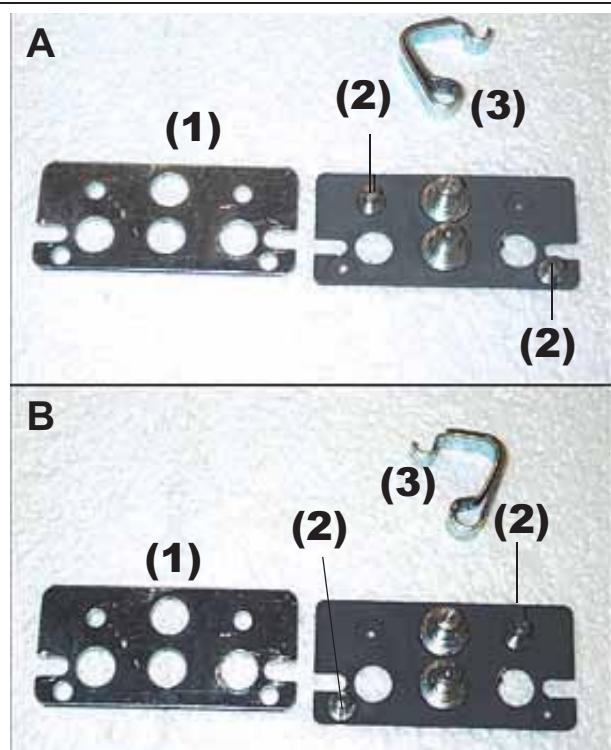
- A) Re-mount the anti-fraying fork
- B) Insert the upper hinger using a metal pipe D 16 (1)
- C) Beat gently on it until the upper hinge has been fully inserted
- D) ABSOLUTELY DO NOT BEAT DIRECTLY



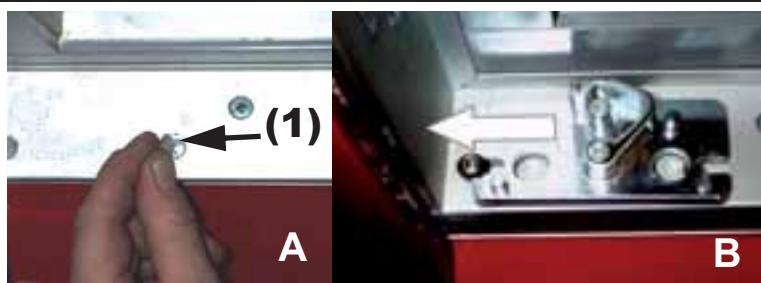
13 Dismantle the lower plate unit..



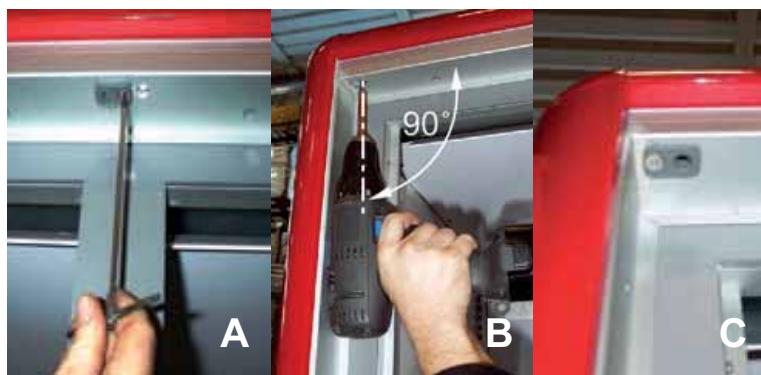
14 Place the previously dismantled lower plat unit on a flat surface, remove the upper plate (1), remove the ratchets (2) and place them in their new housing as indicated in figure B. Rotate the spring (3) by 180°



15 **A)** Remove the plugs that seal the frame holes;  
**B)** Position the previously prepared plate in correspondence with the frame holes



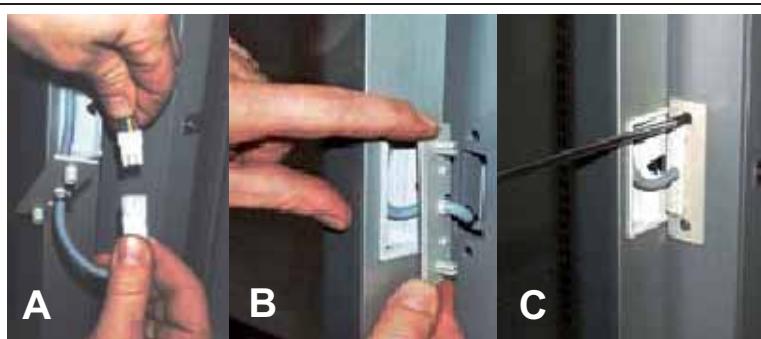
16 **A)** Remove the upper plaque in nylon from the cabinet riser.  
**B)** Using a bit of . max 9 mm, drill in correspondence with the predisposed hole on the left side, so as to create a housing for the pin of the upper hinge. Avoid off-axis or inclined holes.  
Drilling depth: min.18 mm max 24 mm.  
**C)** Re-position the nylon plaque in its new position using the respective screws



17 At this point, re-mount the now left-handed door, making sure to first insert the upper hinge in the hole previously created and to subsequently position it slowly in such a way as to insert the lower pin in the respective hole of the lower plate unit.  
As in dismantling, if difficulties are encountered.



18 Restore the electric connection, taking care to rotate the plaque (1) by 180° so that the words "**left door**" appear on the upper part of the plaque itself.  
**A)** Close the connector;  
**B)** Re-insert the cable;  
**C)** Tighten the screws (1)

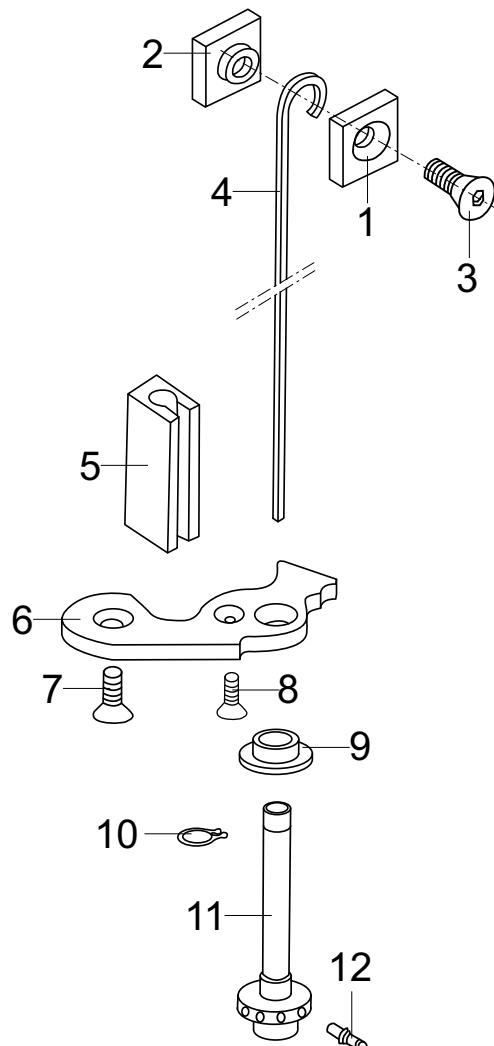


19 Insert the spring-loading spanner into one of the holes of the lower pin, rotate in an anti-clockwise direction so as to insert the loading pin. When the operation has been completed, the door should close automatically. If it is not sufficiently loaded, move the loadingpin by one hole

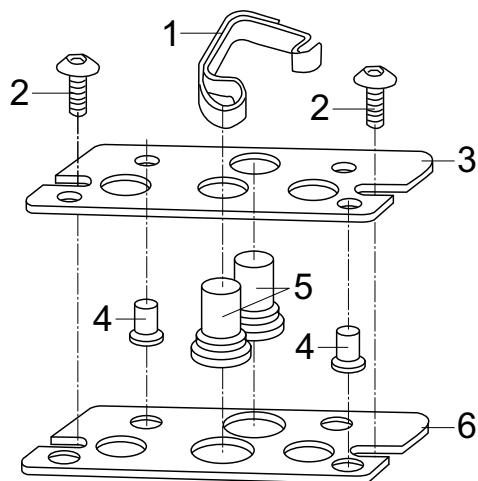


**HINGE UNIT**

- 1) Galvanised block for curved spring
- 2) Threaded galvanised block for curved spring
- 3) Burnished screw M4x8
- 4) Hook-shaped square-section spring
- 5) Lower pin-guide sleeve
- 6) Universal door-block bracket
- 7) Screw
- 8) Screw
- 9) Lower brass
- 10) Universal galvanised Seeger ring
- 11) Square spring lower pin w/ radial holes
- 12) Spring-loading pin

**PLATE UNIT**

- 1) Door-blocking spring
- 2) Plate fixing stainless steel screws
- 3) Blanked plate
- 4) Ratchet for peg
- 5) Pin for door-blocking spring
- 6) Nylon under-plate



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